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**DPH RECOMMENDS AERIAL MOSQUITO SPRAYING DUE TO HIGH HUMAN
RISK OF EEE**

The Department of Public Health is reporting today that significant risk of human disease due to the eastern equine encephalitis (EEE) virus continues in areas of Southeastern Massachusetts. While aerial spraying has reduced the number of mosquitoes in the local region sprayed, the risk to humans continues to remain at a critical level that warrants additional aerial spraying of a larger region in southeastern Massachusetts. The earlier aerial spraying of 159,000 acres has reduced the mosquito population in the area by at least 60 percent.

“The highest risk of human infection occurs in mid- to late August. The area of critical risk to humans has expanded beyond the area treated in the original aerial application. Since the first application of adulticide on August 8th, 34 new mosquito collections have been found to carry the EEE virus. These mosquitoes were collected throughout several areas in both Plymouth and Bristol Counties. Additionally, several collections of mosquito species that are known to be aggressive human biters were identified as carrying the EEE virus,” said DPH Chief Medical Officer Dr. Al DeMaria.

To date, there have been two human cases of Eastern Equine Encephalitis (EEE) this season; a 23-year-old Acushnet man and a 52-year old woman from Lakeville. Both remain in critical condition. Analysis of risk indicators show that the risk of human infections to a critical level in Plymouth and Bristol counties. These indicators include the assessment of virus infection rates in mosquitoes, weather conditions, and identification of the EEE virus in mosquitoes that are more likely to bite humans and therefore cause EEE if they carry the virus.

Truck-mounted spraying to decrease levels of adult mosquitoes has been used to bring down numbers of mosquitoes. However, this approach is effective in urban areas with a limited amount of foliage – targeted treatment areas must be readily accessible to the trucks. The areas of identified high risk at present have dense tree canopies and foliage which would greatly reduce the effectiveness of truck-mounted spraying. Modern methods of aerial spraying to reduce adult mosquitoes, using ultra-low volume application of modern pesticides, have been shown to be more effective in environments such as the area of concern and may actually result in less exposure of the environment to pesticide. The amount of pesticide applied is very small for the area of application.

The agent to be used for reducing mosquito numbers is called Anvil. The active ingredient is sumithrin, a synthetic form of the pesticide that occurs naturally in chrysanthemums. This agent is the same one used for most truck-based spraying and has been applied from aircraft around the country to control mosquitoes. Because such low doses are used when applied from aircraft and the application is done at night, exposure of humans is not expected. The sumithrin is rapidly broken down in the environment and has no residual effect. A Q&A document on aerial spraying and pesticides is available at:

While reducing mosquito populations is an important way of reducing risk, risk of both EEE and West Nile virus infection remains. Everyone in Massachusetts should take measures to reduce their risk of viral infections carried by mosquitoes. These measures include the following:

1. Reduce Risk Around the Home

- **Install or Repair Screens** - Some mosquitoes like to come indoors. Keep them outside by having well-fitting screens on all of your windows and doors.
- **Drain Standing Water** - Mosquitoes lay their eggs in standing water. Limit the number of places around your home for mosquitoes to breed by either draining or getting rid of items that hold water. Check rain gutters and drains. Empty any unused flowerpots and wading pools, and change water in birdbaths frequently.

2. Avoid Mosquitoes and Mosquito Bites

- **Avoid Outdoor Activity During Peak Mosquito Hours.** The hours from dusk to dawn are peak mosquito biting times for many mosquitoes. Take extra care to use repellent and protective clothing during evening and early morning or consider avoiding outdoor activities during these times.
- **Clothing Can Help** reduce mosquito bites. When possible, wear long-sleeves, long pants and socks when outdoors.
- **Apply Insect Repellent** when you go outdoors. A variety of insect repellent products is available. Always follow the instructions on the product label; repellent products provide guidance on how frequently they may be used and provide precautions on how they should be used. **Pay particular attention to restrictions on use for children.** The most effective repellents contain DEET (N,N-diethyl-m-toluamide), Picardin (KBR 3023) or Permethrin. DEET (avoid concentrations over 30 percent) and Picaridin can be used directly on skin and on clothing. Permethrin can be used only on clothing. Oil of lemon eucalyptus has also demonstrated efficacy against mosquito bites, with protection similar to repellents with low concentrations of DEET.

3. Help Your Community

- **Report Dead Birds** to the DPH. Dead birds may be a sign that WNV is circulating among the birds and mosquitoes in an area. Call 1-866-MASS WNV to report a dead bird. By reporting dead birds, you can play an important role in monitoring WNV.

Mosquito control in Massachusetts is conducted through nine mosquito control districts, with 159 member communities. You can check with your local health department to see if there is an organized mosquito control program in your area. DPH staff on the WNV hotline can also direct any questions you have to the appropriate personnel.

More information about the mosquito-borne diseases found in Massachusetts, EEE and WNV is available at the following DPH website: www.mass.gov/dph/wnv/wnv1.htm. Information about local mosquito control programs is available by calling your local health department. For questions about aerial spraying and health effects of pesticides or to report any concerns about adverse reactions to pesticides call the MDPH Center for Environmental Health at (617) 624-5757. Information about WNV is also available by calling the DPH recorded information line at 1-866-MASS-WNV (1-866-627-7968).

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